WHAT IS CLAIMED IS:

1. A method for alerting the pilot of an aircraft to a potentially hazardous condition comprising the steps of:

 estimating a deceleration required to stop the aircraft on a runway of intended landing;

 comparing said deceleration to a maximum deceleration of the aircraft; and

 asserting an alert signal when said deceleration is greater than said maximum deceleration.

2. The method of claim 1 wherein said step of estimating deceleration further includes the step of including a gain factor in said deceleration to account for at least one of a plurality of runway surface conditions.

3. The method of claim 1 wherein said step of estimating deceleration further includes the step of including a gain factor in said deceleration to account for at least one atmospheric condition.

4. The method of claim 1 wherein said step of asserting an alert signal includes the step of commanding an autopilot go-around manouevre.

5. A method for alerting the pilot of an aircraft to a potential go-around condition comprising the steps of:

 monitoring a plurality of parameters indicative of an unstabilized approach;

 assigning a risk of go-around value according to each of said parameters; and

 asserting an alert signal when said value exceeds a predetermined threshold amount.

6. The method of claim 5 wherein said step of monitoring a plurality of parameters includes the step of monitoring a change in a speed of the aircraft.

7. The method of claim 5 wherein said step of monitoring a plurality of parameters includes the step of monitoring a runway wind condition.

1   8.   The method of claim 5 wherein said step of monitoring a plurality of
2 parameters includes the step of monitoring a flight path angle of the aircraft.

1   9.   The method of claim 5 wherein said step of monitoring a plurality of
2 parameters includes the step of monitoring a position of the aircraft.

1   10.   The method of claim 5 wherein said step of monitoring a plurality of
2 parameters includes the step of monitoring a track of the aircraft.

1   11.   The method of claim 5 wherein said step of asserting an alert signal
2 comprises the step of commanding an autopilot go-around manouevre.

1   12.   The method of claim 5 wherein said step of asserting an alert signal
2 further comprises the steps of:
3   asserting a go-around caution alert signal when said value exceeds a first
4 threshold amount and is less than a second threshold amount; and
5   asserting a go-around warning signal when said value exceeds said second
6 threshold amount.

1   13.   A method of alerting the pilot of an aircraft to a potential go-around
2 condition comprising the steps of:
3   monitoring a plurality of parameters indicative of a runway landing length
4 required;
5   assigning a risk of runway overrun value based on said plurality of parameters;
6 and
7   asserting an alert signal when said risk value exceeds a predetermined
8 threshold value.

1   14.   The method of claim 13 wherein said step of monitoring a plurality of
2 parameters includes the step of monitoring a deceleration required to stop the aircraft.

1   15.   The method of claim 13 wherein said step of monitoring a plurality of

2   parameters includes the step of monitoring a runway surface condition.

1   16.   The method of claim 13 wherein said step of monitoring a plurality of

2   parameters includes the step of monitoring at least one atmospheric condition.

1   17.   The method of claim 13 wherein said step of asserting an alert signal

2   further comprises the steps of:

3   asserting a go-around caution alert signal when said value exceeds a first

4   threshold amount and is less than a second threshold amount; and

5   asserting a go-around warning signal when said value exceeds said second

6   threshold amount.

1   18.   The method of claim 13 wherein said step of asserting an alert signal

2   comprises the step of commanding an autopilot go-around manouevre.

1   19.   A computer program product for alerting the pilot of an aircraft to a

2   potentially hazardous condition comprising:

3   a computer readable storage medium having computer readable program code

4   means embodied in said medium, said computer readable program code means having:

5   a first computer instruction means for estimating a deceleration required to

6   stop the aircraft on a runway of intended landing;

7   a second computer instruction means for comparing said deceleration to a

8   maximum deceleration of the aircraft; and

9   a third computer instruction means for asserting an alert signal when said

10   deceleration is greater than said maximum deceleration.

1   20.   The computer program product of claim 19 further including a fourth

2   instruction means for asserting an autopilot go-around command when said alert signal is

3   asserted.

1   21.   A computer program product for alerting the pilot of an aircraft to a

2   potential go-around condition comprising:

3   a computer readable storage medium having computer readable program code

4   means embodied in said medium, said computer readable program code means having:

5   a first computer instruction means for accessing and monitoring a plurality of

6   parameters indicative of an unstabilized approach;

7   a second computer instruction means for assigning a risk of go-around value

8   according to each of said parameters; and

9   a third computer instruction means for asserting an alert signal when said

10   value exceeds a predetermined threshold amount.

1   22.   The computer program product of claim 21 further comprising a fourth

2   instruction means for asserting an autopilot go-around command when said alert signal is

3   asserted.

1   23.   A computer program product for alerting the pilot of an aircraft to a

2   potential go around condition comprising:

3   a computer readable storage medium having computer readable program code

4   means embodied in said medium, said computer readable program code means having:

5   a first computer instruction means for accessing and monitoring a plurality of

6   parameters indicative of a runway landing length required;

7   a second computer instruction means for assigning a risk of runway overrun

8   value based on said plurality of parameters; and

9   a third computer instruction means for asserting an alert signal when said risk

10   value exceeds a predetermined threshold value.

1   24.   The computer program product of claim 23 further including a fourth

2   computer instruction means for asserting an autopilot go-around command when said alert

3   signal is asserted.

1   25.   An apparatus for alerting the pilot of an aircraft to a potential go-

2   around condition comprising:

3   an input coupled to receive a plurality of parameters useful as indicators of an

4   unstabilized approach;

5   an output; and

6	a signal processing device, coupled to said input, and to said output for:
7	assigning a risk of go-around value according to each of said parameters; and
8	asserting an alert signal when said value exceeds a predetermined threshold
9	amount.

1   26.   The apparatus of claim 25 wherein said apparatus comprises an
2 Enhanced Ground Proximity Warning computer.

1   27.   The apparatus of claim 25 wherein said alert signal further includes
2 signals useful for driving a display.

1   28.   The apparatus of claim 25 wherein said alert signal further includes an
2 aural alert signal.

1   29.   The apparatus of claim 25 wherein said parameters include a change in
2 a speed of the aircraft.

1   30.   The apparatus of claim 25 wherein said parameters include a runway
2 wind condition.

1   31.   The apparatus of claim 25 wherein said parameters include a flight
2 path angle of the aircraft.

1   32.   The apparatus of claim 25 wherein said parameters include a position
2 of the aircraft.

1   33.   The apparatus of claim 25 wherein said parameters include a track of
2 the aircraft.

1   34.   The apparatus of claim 25 wherein said alert signal comprises an
2 autopilot go-around manouevre command.

1   35. The apparatus of claim 25 further including a database of runway data.

1   36. The apparatus of claim 25 wherein said parameters include runway
2 data.

1   37. The apparatus of claim 25 wherein said parameters include terrain
2 data.

1   38. An apparatus for alerting the pilot of an aircraft to a potential go-
2 around condition comprising:
3   an input coupled to receive a plurality of parameters useful as indicative of a
4 runway landing length required;
5   an output; and
6   a signal processing device, coupled to said input and to said output, for:
7   assigning a risk of runway overrun value based on said plurality of
8   parameters; and
9   asserting an alert signal when said risk value exceeds a predetermined
10   threshold value.

1   39. The apparatus of claim 38 wherein said parameters include a
2 deceleration required to stop the aircraft.

1   40. The apparatus of claim 38 wherein said parameters include a runway
2 surface condition.

1   41. The apparatus of claim 38 wherein said parameters include at least one
2 atmospheric condition.

1   42. The apparatus of claim 38 wherein said apparatus comprises an
2 Enhanced Ground Proximity Warning computer.

1   43.   The apparatus of claim 38 wherein said alert signal further includes
2   signals useful for driving a display.

1   44.   The apparatus of claim 38 wherein said alert signal further includes an
2   aural alert signal.

1   45.   The apparatus of claim 38 wherein said alert signal comprises an
2   autopilot go-around manouevre command.

1   46.   The apparatus of claim 38 further including a database of runway data.

1   47.   The apparatus of claim 38 wherein said parameters include runway
2   data.

1   48.   The apparatus of claim 38 wherein said parameters include terrain
2   data.

1   49.   An apparatus for alerting the pilot of an aircraft to a potentially
2   hazardous condition comprising:
3   an input coupled to receive runway data and at least one aircraft performance
4   data;
5   an output; and
6   a signal processing device coupled to said input and to said output for:
7   estimating a deceleration required to stop the aircraft on a runway of
8   intended landing;
9   comparing said deceleration to a maximum deceleration of the aircraft;
10   and
11   asserting an alert signal when said deceleration is greater than said
12   maximum deceleration.

50. The apparatus of claim 49 wherein said runway data includes at least one runway surface condition.

51. The apparatus of claim 49 wherein said input is further coupled to receive at least one atmospheric condition.

52. The apparatus of claim 49 wherein said input is further coupled to receive a runway end point data.

53. The apparatus of claim 49 wherein said alert signal includes an autopilot go-around manouevre command.

54. The apparatus of claim 49 wherein said alert signal further includes signals useful for driving a display.

55. The apparatus of claim 49 wherein said alert signal further includes an aural alert signal.

56. The apparatus of claim 49 further including a database of runway data.

57. The apparatus of claim 49 wherein said apparatus comprises an Enhanced Ground Proximity Warning computer.

58. The apparatus of claim 56 wherein said database further includes terrain data.

59. The apparatus of claim 46 wherein said database further includes terrain data.